

COMPLETE: A randomized, comparative effectiveness study of complete versus culprit-only revascularization strategies to treat Multivessel disease after early percutaneous coronary intervention in ST segment elevation myocardial infarction

Purpose: To determine if a strategy of multivessel revascularization involving PCI of all suitable non-infarct related artery lesions plus optimal medical therapy is superior to a strategy of optimal medical therapy (OMT) alone.

Trial Design: N= 4,041. Interventional, randomized, parallel single masked trial. Following successful PCI (contemporary drug eluting stents recommended) of the culprit lesion for STEMI, routine staged PCI of all - suitable lesions with the goal of **complete** revascularization vs- no further revascularization of non-culprit lesions, GDMT alone – culprit lesion only revascularization.

Primary Endpoints: 1): the composite of CV death or non-fatal MI and 2) the composite of CV death, new non-fatal MI or ischemia-driven revascularization (IDR) at a median follow-up of 3 years.

Efficacy Outcomes	Complete Revasc	Culprit Lesion	Hazard Ratio	P value
CV death or new non-fatal MI	N=158 7.8% (2.7%/yr.)	N=213 10.5% 6.2%/yr.)	HR = 0.74 95% CI – 0.60-0.91	P=0.004
CV death, new non-fatal MI or ischemia-driven revascularization	N=179 8.9% (3.1%/yr.)	N=399 16.7% (6.2%/yr)	HR=0.5 95% CI 0.43	P= <0.001

Results: In patients with STEMI and multivessel disease CAD comparing culprit lesion – PCI; routine non-culprit lesion PCI – goal of complete revascularization.

- Reduction in CV death or new MI by 26% (p=0.004)
- Reduction CV death, new MI, or IDR by 49% (p=<0.001)

